

REMARKS

Claims 1-42 are pending in the current application. Claims 1, 21, 28 and 36 are independent claims.

Allowable Subject Matter

Initially, Applicant appreciates the Examiner's withdrawal of the previous art grounds of rejection. Applicant further appreciates the Examiner's indication that claims 21-34 are allowed and claims 5-7 and 19-20 would be allowable if rewritten into independent form. Applicant respectfully submits that in view of the remarks below, all claims are allowable in their present form.

35 U.S.C. § 103(a) Jones in view of Chang

Claims 1 and 4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Jones in view of Chang. Applicant respectfully traverses this art grounds of rejection.

Jones is directed to an autonomous remote measurement unit for a personal communication service (PCS) system. Generally, Jones discloses a frequency control system which allows a plurality of PCS systems to coexist in the same frequency band. The Examiner alleges that Jones discloses "varying antenna directions of a plurality of antennas throughout ranges of antenna radiation directions" substantially in col. 11, line 66- col. 17, line 5 and col. 11, lines 41-54 (see page 2 of the Office Action). The portion of Jones referred to by the Examiner recites the following:

The RF engineer begins by selecting the Theoretical Propagation Analyses 124, Intersystem Evaluation 127 from the main menu 122 of the CUC 50. A flow chart for the intersystem interference analysis is provided as FIG. 11.

Referring to FIG. 11 the RF engineer selects the propagation model 200 to be used in the analysis. In this case, the RF engineer select the Hata propagation model.

Jones, col. 16, line 66 – col. 17, line 5.

From a review of the section, the Examiner appears to be indicating that “varying the antenna radiation directions of a plurality of antennas” reads on the selected propagation model 200. However, a detailed review of the Jones reference shows that the propagation model 200 is directed to frequency propagation, and is entirely unrelated to varying directions of antennas. Jones mentions antenna direction in only one portion of the Jones patent, where antenna directions are mentioned as constants which cannot change. Jones states “[t]he RF engineer also uses a three sector system, i.e., three 120° antennas are utilized instead of an omnidirectional antenna, at some sites to decrease intrasystem co-channel interference. The three sector system divides each of the three channel groups into three sub-groups as shown on the table in Appendix 1” (see col. 23, lines 5-10 of Jones). Thus, Jones merely discloses three 120 degree antennas and cannot disclose or suggest varying these antenna directions.

Further, Applicant agrees with the Examiner in that “Jones fails to specifically disclose determining a resultant antenna radiation direction within the ranges for each of the antennas in the wireless network or segment thereof in which to transmit to a plurality of subscribers based on the measured signal parameters to achieve desired performance criteria” (see page 2 of the Office Action). The Examiner seeks to combine Jones with Chang in order to overcome this particular deficiency. However, as will now be explained, Chang fails to disclose or suggest both of the two above described deficiencies of Jones.

Chang discloses multiple beam antenna arrays for base stations in which the channel follows the mobile unit. Chang discloses dynamically reconfiguring a beam spot layout for each cell in order to compensate for varying mobile traffic patterns. The Examiner refers to col. 3, lines 50-63 as disclosing the determining step recited in independent claim 1. Col. 3,

lines 50-63 of Chang recites “radiating an array of geographically spaced beam spots within the cell” and radiating “the communication channel assigned to the mobile unit to a selected number of beam spots based on the received signal strength”. Applicant respectfully submits that the Examiner is confusing beam spot toggling with the claimed varying of antenna radiation directions. Applicant refers the Examiner to col. 6, lines 41-61 which recites:

If the mobile unit is determined to be a fast mobile (step 604), the system estimates the direction of the mobile unit (step 606), based on its movement history, and turns on all the channels in the mobile unit's zone that the direction prediction step 606 predicts the mobile unit will travel through (step 607). For example, referring to FIG. 4, if a fast moving mobile unit enters beam-spot 410 from beam-spot 411, the system may turn on the traffic channels in beam-spot 411, the system may turn on the traffic channels in beam-spot 407 associated with the mobile unit. At the same time, or at a later time, the system will turn off the corresponding channels in beam-spot 415. The traffic channels associated with the mobile unit in beam-spots 411, 410 and 408 remain activated from a previous operation. When the mobile unit exists beam-spot 410 and enters 408, the system will turn on its channel in beam-spot 406 and turn off its channel in beam-spot 411. The channel in beam-spot 407 remains on a previous activation. Additionally, if the system determines that the mobile unit may enter beam-spot 409, it will turn on its channel in beam-spot 409. In this manner, the system switching load is decreased-reducing the hardware required and increasing reliability.

Chang, col. 6, lines 41-61.

It is clear from a review of the above cited portion of Chang that Chang simply discloses toggling (i.e., either turning on or turning off) beam spots or channels for mobile users based on their expected positions. Applicant respectfully submits that toggling channel statuses is not varying antenna direction because the antenna beams for the channels either transmit or fail to transmit in a given direction. Whether or not a channel remains on or is turned off does not necessarily affect the antenna direction.

In view of the above remarks, Applicant respectfully submits that the combination of Jones and Chang could not disclose or suggest “varying antenna radiation directions of a

plurality of antennas throughout ranges of antenna radiation directions” as recited in independent claim 1.

As such, claim 4 dependent upon independent claim 1, is likewise allowable over the combination of Jones and Chang at least for the reasons given above with respect to independent claim 1.

Applicant respectfully requests that the Examiner withdraw this art grounds of rejection.

35 U.S.C. § 103(a) Jones in view of Chang and further in view of Keskitalo

Claim 2 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Jones in view of Chang and further in view of Keskitalo. Applicant traverses this art grounds of rejection.

Initially, Applicant agrees with the Examiner in that “Jones in view of Chang fail[s] to specifically disclose [that] the resultant antenna radiation direction is defined as a two dimensional vector representing angle of azimuth from a corresponding antenna and a down-tilt angle from the corresponding antenna” (page 3 of the Office Action). The Examiner alleges that Keskitalo discloses this particular deficiency of Jones and Chang.

In the previous response to the Office Action, Applicant discussed Keskitalo in detail and argued how Keskitalo does not disclose or suggest that claimed features of independent claim 1. The Examiner appeared receptive to this argument and thereafter withdrew the art grounds of rejection with Keskitalo as a primary reference. In the above-remarks, Applicant has shown how Jones in view of Chang fails to disclose or suggest the limitations of independent claim 1. In view of the above remarks and the arguments presented on Pages

11-12 of the previous response, it follows that Jones in view of Chang and further in view of Keskitalo cannot disclose or suggest the limitations of independent claim 1.

As such, claim 2, dependent upon independent claim 1, is likewise allowable over the combination of Jones in view of Chang and further in view of Keskitalo at for the reasons given above with respect to independent claim 1.

Applicant respectfully requests that the Examiner withdraw this art grounds of rejection.

35 U.S.C. § 103(a) Jones in view of Chang and further in view of Petri

Claim 3 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Jones in view of Chang and further in view of Petri. Applicant traverses this art grounds of rejection.

A cursory review of Petri reveals that Petri is insufficient in disclosing or suggesting the above-described deficiencies of Jones in view of Chang with respect to independent claim 1. As such, claim 3, dependent upon independent claim 1, is likewise allowable over the combination of Jones in view of Chang and further in view of Petri at least for the reasons given above with respect to independent claim 1.

Applicant respectfully requests that the Examiner withdraw this art grounds of rejection.

35 U.S.C. § 103(a) Jones in view of Chang and further in view of Avidor

Claim 8 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Jones in view of Chang and further in view of Avidor. Applicant respectfully traverses this art grounds of rejection.

A cursory review of Avidor reveals that Avidor is insufficient in overcoming the deficiencies of Jones in view of Chang above-described with respect to independent claim 1.

As such, claim 8, dependent upon independent claim 1, is likewise allowable over the combination of Jones in view of Chang and further in view of Avidor at least for the reasons given above with respect to independent claim 1.

Applicant respectfully requests that the Examiner withdraw this art grounds of rejection.

Additional Subject Matter

In the Office Action mailed June 16, 2005, the Examiner indicates that claims 1-34 are pending in the current application. The Examiner appears to have disregarded claims 35 and 36, including independent claim 36, initially proposed in the Amendment filed on February 22, 2005. In the present Amendment, Applicant has added new claims 37-42, dependent on independent claim 36. Applicant respectfully requests that the Examiner consider each of claims 35-42.

With respect to claim 35, Applicant respectfully submits that claim 35, dependent on independent claim 1, is allowable over the cited art of record at least for the reasons given above with respect to independent claim 1.

With respect to independent claim 36, Applicant respectfully submits that independent claims 36 is allowable over the cited art of record for similar reasons as those discussed above with respect to the other pending independent claims. As such, claims 37-42, dependent on independent claim 36, is likewise allowable at least for the reasons given above respect to independent claim 36.

Reconsideration and issuance of all pending claims is respectfully requested.

CONCLUSION

Accordingly, in view of the above amendments and remarks, reconsideration of the objections and rejections and allowance of each of claims 1-42 in connection with the present application is earnestly solicited.

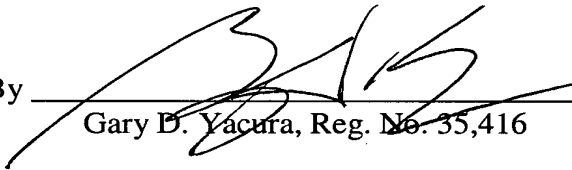
Should there be any outstanding matters that need to be resolved in the present application; the Examiner is respectfully requested to contact the undersigned at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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By


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